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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,889	02/07/2006	Andreas Kramer	126440	2244

27049 7590 09/21/2010

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EXAMINER	
TOSCANO, ALICIA	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
09/21/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/564,889	KRAMER ET AL.	
	Examiner	Art Unit	
	ALICIA TOSCANO	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-11,13-24,26-31 and 33* is/are pending in the application.

4a) Of the above claim(s) *24,26 and 28-31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-11, 13-23, 27, 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Examiner Toscano has taken over this case from Examiner Baumstein. The amendments overcome the previous rejections set forth by Examiner Baumstein, however in further consideration of the Lu reference new rejections are set forth below. Since these rejections could have been made at an early date with the Lu reference this action is made non-final.

Response to Arguments

2. Applicant's arguments filed 7/14/10 have been fully considered but they are not persuasive. Applicant argues that, as suggested by Examiner Baumstein, the claims have been amended to require the backbone of the polyurethane to be aromatic. Applicant argues such a limitation is not met by the references. Applicant argues Kordomenos does not disclose the structure required by the claims. Applicant argues Kaji does not remedy the deficiencies of Lu et al.

3. The Examiner agrees that Lu v. Kordomenos does not meet the structural requirements of the claims as applied by Examiner Baumstein. As such those rejections have been overcome. However, in further consideration of Lu, the Examiner found Lu to be pertinent to the instant claims and new positions are set forth below. Arguments that Kordomenos does not disclose the structure of the claims is moot since Kordomenos is not used in the rejection below. Arguments that Kaji does not make up for the deficiencies of Lu et al are not persuasive since Lu is not deficient, as newly set forth below.

Claim Objections

4. Claims 1-5, 7-11, 13-23, 33 are objected to because of the following informalities: the language of "terminated with isocyanate groups after removal of the terminal isocyanate groups", found in all of the independent claims above, does not limit the claims. One cannot have a terminal isocyanate group after removing said isocyanate group. The claim language should be corrected to better reflect the desired product. Appropriate correction is required.

5. Claims 8-9, 11 are objected to because of the following informalities: The Examiner believes the language "polymer of the formula (III) is a (polyol, polyalkylene glycol or diisocyanate)" of the above claims should be treated as "polymer of the formula (III) includes a unit derived from (polyol, polyakylene glycol or diisocyanate)", and will treat it as such. Appropriate correction is required.

6. Claim 11 is objected to because of the following informalities: the isocyanates therein are abbreviated. The Examiner requires the abbreviations to be written out in full. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5, 7-11, 13-17, 19-23, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (US 6740192) in view of Merz (US 2002/0007003).

Lu discloses electroconductive materials with electroconductive adhesive containing epoxide modified polyurethanes. The epoxide modified polyurethane may be the reaction of an polyalkylene oxide modified phenol-formaldehyde resin (Column 9 line 35), or an active hydrogen containing compound, and an isocyanate. “aromatic moiety” can be defined as any linkages comprising aromatic compounds therein (i.e. there is no structural definition of "moiety"). "moiety" in the claims can be as broad as the entire alkylene oxide modified resin (which is how the Examiner is interpreting it), or, as narrow as one benzene ring (which is what Applicant seems to desire). Thusly, the alkylene oxide modified phenol-formaldehyde resin meets the Ar1 requirements of the claims. It also meets the Y3 requirements of the claims, since there are no structural requirements other than "moiety" required by such. The active hydrogen containing compound is reacted with the isocyanate to form an isocyanate terminated product.

This product is further reacted with an epoxy compound to form an epoxy terminated compound that meets the requirements of polymer B of claim 1. There is no structural different required between epoxide adduct A and polymer B, thusly the polymer also meets the epoxide adduct A of claim 1. Alternatively, a second epoxy resin may be included which may be a bisphenol-epichlorohydrin product (see the formula that bridges the top of Columns 15 and 16), or any of the other epoxy compounds disclosed in Columns 12-16. Curing agents are disclosed in Column 11 lines 5-30 and Column 15 lines 40-Column 16 line 54.

Lu includes elements as set forth above. Lu meets the requirements of adduct A, polymer B and curing agent D, as set forth above. Lu does not disclose the use of thixotropic agents, as further required by the claim.

Merz discloses thixotropic agents for one-component adhesives and sealents. The thixotropic agents are suitable for any crosslinking system, including epoxy crosslinking systems (i.e. the system of Lu) [0010]. Merz discloses thixotropic agents comprising 5-50% of a urea derivative [0011] in a carrier solvent of block isocyanate polymers [0014]. Though the amount of agent added to an adhesive is not specifically disclosed, the Examples exemplify the use of about 25 wt%. The agent is the reaction product of an aromatic diisocyanate and an aliphatic amine [0011]. The thixotropic agents give no-sag, migration free adhesive products.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Lu the use of the thixotropic agents, as taught by Merz, in order to improve the sag and migration performance of the adhesive.

As such all elements of claim 1 are met. The bisphenol A-epichlorohydrin product discussed above is obtainable from an aromatic alcohol (bisphenol A) and a diglycidyl ether (a bisphenol A-epichlorohydrin product which is not completely polymerized), as required by claim 2, the dicarboxylic acid of claim 3 is optional and bisphenol A-glycidyl ethers are as above, as required by claim 3, bisphenol A meets the requirements of claim 4, since the composition requirements are met and since the polymers are mixed together the soluble and dispersible requirements of claim 5 are deemed met. The reaction discussed above involves a polyphenol (the phenol-formaldehyde resin), a isocyanate reactive polymer (the phenol-formaldehyde resin) and a polyisocyanate, as required by claim 7, the phenol-formaldehyde is modified by alkylene oxides, forming polyalkylenepolyol derived linkages, as required by claim 8, since ethylene oxide, propylene oxide, butylene oxide and THF are the exemplified alkylene oxides used for the polyethers of the composition, it is the Examiner's position one would immediately envisage using them for modifying the phenol-formaldehyde resin, as required by claim 9. A MW of the active hydrogen compounds is not disclosed, however an example of such is disclosed in Ex 1 using a active hydrogen compound of PolyTBF 2000, having a MW of approximately 2000, thusly based on NCO-groups it has a MW of 1000. Since this is an exemplified MW of the active hydrogen compound it is the Examiner's position one would use it when using the alkylene oxide phenol-formaldehyde resin, as required by claim 10, the isocyanates of Column 7 lines 20-30 meet the requirements of claim 11, the composition of Ex 2 comprises 13 wt% polyurethane resin, as required by claim 13. The thixotropic agent

discussed above meets the requirements of claims 14-17. The curing/crosslinking agent is added in an amount ranging 1-50 wt% of the composition (Column 11 line 30), as required by claim 19. In light of the overlapping nature of this range with the claimed range, a prima facie case of obviousness exists over the claimed range. Fillers may be added in amounts ranging 5-95 wt% of the composition (Column 3 line 21), as required by claim 21. In light of the overlapping nature of this range with the claimed range, a prima facie case of obviousness exists over the claimed range. The adduct A and the polymer B meet the requirements of claim 22, alternatively and additionally, glycidyl ether diluents are disclosed in Column 16 line 67, as required by claim 22. Since the composition requirements are met the properties of claim 23 are deemed inherent. The properties are drawn to a future intended (cured) use. If there is any difference between the above composition and the composition of the instant claims the difference would have been minor and obvious. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See MPEP 2112.01(I) , *In re Best*, 562 F2d at 1255, 195 USPQ at 433, *Titanium Metals Corp v Banner*, 778 F2d 775, 227 USPQ 773 (Fed Cir 1985), *In re Ludtke*, 441 F2d 660, 169 USPQ 563 (CCPA 1971) and *Northam Warren Corp v D F Newfield Co*, 7 F Supp 773, 22 USPQ 313 (EDNY 1934).

The composition set forth above meets the requirements of claim 27. Polymer B is obtainable by reaction of a diisocyanate (the isocyanate reacted alkylene oxide

phenol-formaldehyde polymer) and an active hydrogen containing epoxide, as further required by claim 33.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Merz in further view of Kaji (WO 0248235, US 6903180 is used as an equivalent English translation of '235).

Lu and Merz include elements as set forth above. Lu discloses crosslinking agents such as tetrahydrophathalic anhydride, phthalic anhydride and the like (Column 11 lines 19-20). Lu does not disclose the agents of claim 18.

Kaji discloses reaction compositions of epoxy resins, a similar composition and reaction product as in Lu. Kaji discloses crosslinking curing agents such as dicyandiamide (Column 4 line 64), phthalic anhydride, tetrahydrophathalic anhydride and the like (Column 5 lines 15-16). Kaji thusly teaches the functional equivalence of the above agents for a similar reaction to that taught in Lu.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Lu and Merz the use of dicyandiamide, as taught by Kaji, since it is recognized in the art as a functional equivalent to those agents taught by Merz.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALICIA TOSCANO whose telephone number is (571)272-2451. The examiner can normally be reached on M-F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALICIA TOSCANO/
Examiner, Art Unit 1796